

October 24, 2003

Mr. Bill Storm  
Department of Administration  
Environmental Quality Board  
658 Cedar Street, Room 300  
St. Paul, MN 55155

**Re: Response to Waseca County Comments on NGPP Minnesota Biomass EAW**

Dear Mr. Storm:

HDR, Inc appreciates the opportunity to respond to the comments from Angela Knish, Waseca County Planning and Zoning Administrator, on the NGPP Minnesota Biomass project.

In her letter, dated September 29, 2003, Ms. Knish corrected statements in the EAW regarding the zoning of site 2 and the presence of agricultural preserve lands in Waseca County. HDR concurs with Ms. Knish's assessment of those areas and appreciates her corrections.

Ms. Knish also requested more information about several aspects of the proposed plant's construction and operation: the ash handling system; impacts to water quality; waste disposal; traffic impacts; the water vapor plume from the cooling tower; odors; and height restrictions in the vicinity of the airport. Our response to these comments is as follows:

Ash Handling System: Ash generated by the combustion will not be odorous or hazardous and will not have any special storage requirements. NGPP Minnesota Biomass, LLC will be cautious about receiving any fuel supply that may contain a contaminant. NGPP Minnesota Biomass, LLC plans to sell the bottom ash as a lime replacement, as NGP Power has done for some time at its operating facility in Lyonsdale, NY. All producers wishing to sell agricultural liming materials must be licensed by the state. Minnesota also requires periodic sampling and analysis of the liming material for a quality rating.

Impacts to Water Quality:

During construction, an erosion control plan will be implemented to reduce the likelihood of sediments being transported to adjacent surface waters. The erosion control plan may consist of one or more of the following: silt fences, bale checks, temporary cover seeding, stormwater detention basin and grit traps. After construction is completed, a permanent stormwater control plan will be implemented.

Based upon the types of soils present at both sites, neither site has a high potential for groundwater contamination.

Storm water from both sites will be routed to some type of holding pond, either a newly constructed evaporation/holding pond or, possibly at site 1, the existing Birdseye wastewater pond. Water from the pond will be characterized and, if necessary, treated prior to being land applied or discharged to the LeSueur River. All necessary permits will be obtained prior to water disposal. The stormwater will be at ambient temperature. If the water is discharged to the LeSueur River limits for the water quality and quantity will be addressed in the permit.

Tanks used to store fuel for the facility's vehicle fleet and reagent for SNCR NOx reduction will meet all requirements including registration, labeling, construction, inspection and any necessary secondary containment.

Waste Disposal: It is expected that the plant will produce less than 100 kilograms per month of hazardous wastes. To the extent possible, efforts will be made to minimize the generation of hazardous wastes. As part of the Minnesota Pollution Control Agency licensing process for hazardous waste generators, the facility will specify the types and amounts of waste that the facility expects to generate and the methods of treatment and disposal. Hazardous wastes will not be disposed of on the facility property; the facility will contract with a licensed disposal facility for disposal of hazardous wastes.

Traffic Impacts: Based upon HDR's analysis of expected traffic, existing traffic volumes in the vicinity of the plant and planned transportation improvements in the Waseca area, HDR believes that the transportation network in the vicinity of the plant is able to support the anticipated traffic generated by the NGPP Minnesota Biomass plant. The locations of fuel suppliers, and the routes from the fuel sources to the plant, are not known at this time.

Since the location of the fuel supplies is unknown and will be variable, HDR's capacity analysis assumed that vehicles would be oriented to one of the Trunk Highways serving the area, based on a conservative assumption that all site-generated traffic would be single-loaded onto one of the roadways serving either Site 1 or 2. The existing Average Daily Traffic (ADT) surrounding the area is documented in Table 1.

**Table 1**  
**Existing Average Daily Traffic (ADT) and Level-of-Service (LOS)**

Roadway	Between	ADT <sup>1</sup>	Existing Level-of-Service <sup>2</sup>
County Hwy. 27	T.H. 14 & C.R. 57	970	LOS A
County Road 57	C.H. 27 & C.H. 4	1200-2450	LOS A
County Hwy. 4	C.R. 57 & C.R. 51	2150	LOS A
T.H. 13	Waseca-South	2650	LOS A/B
T.H. 14	Waseca-West	6200	LOS B/C

Source: (1) Waseca County 2002 ADT Data, (2) HDR, Inc.



Based on the estimated reserve capacity in the surrounding highways, combined with the anticipated level of traffic generation, roadway capacity is not expected to be an issue. Mn/DOT and isolated urban centers (like Waseca) will typically accept LOS C operations on most highways. Even with conservative levels of generation, the area roadways are still expected to operate with a large amount of reserve capacity. The one exception, T.H. 14, already has a pre-established mitigation plan with the scheduled construction of a four-lane facility around Waseca.

Vapor Plume: Cooling towers are used to dissipate heat generated in the electrical power production. Mechanical-draft "wet" cooling towers are proposed to cool the water from the condenser. In a mechanical-draft cooling tower, fans force air into the cooling tower and through a fine spray of heated water where evaporation cools the water stream and transfers heat to the air. The warm moist air exhausts through the top of the cooling tower and comes in contact with cooler ambient atmosphere where the water vapor may condense into fine water drops creating a visible "steam" plume. As the plume mixes with more ambient air, the drops eventually re-evaporate and the visible plume dissipates.

Fogging is assumed to occur when the visible plume reaches the ground, posing a potential hazard to nearby traffic. Icing occurs when the visible plume reaches the ground under freezing conditions.

Generally, as the plume extends outward from the cooling tower, it gradually rises to heights of 100 feet or greater before dissipating. Meteorological conditions conducive to fogging or icing occur infrequently.

At the primary proposed site, the nearest roadways are greater than 2,400 feet (732 meters) away. It is anticipated that any plume resultant from the cooling towers will be completely dissipated before reaching a roadway. If not dissipated, the plume is anticipated to be at such a height that it will not interfere with roadway traffic.

Based on Seasonal/Annual Cooling Tower Impact (SACTI) modeling analyses prepared for similar cooling towers at much larger facilities (950 MW vs. the proposed 38.5 MW), maximum plume distances of 1,000 to 1,500 meters and maximum plume heights of 130 to 300 feet were estimated. Because of the much smaller size of the proposed cooling towers (2 cells as opposed to 18 cells) it is anticipated that the cooling tower plume will dissipate over a much shorter distance and will not pose a hazard to nearby roads.

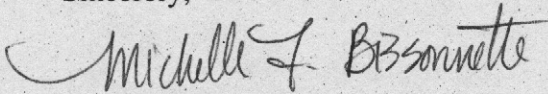
Odors: Once the plant becomes operational, wood chips stored at the plant may generate some odor as they decompose, but the odor will be neither unpleasant nor overpowering. The odor from biomass storage at the St. Paul Cogeneration facility in downtown St. Paul was described as "a sweet-sour smell, almost a woody odor" by the Environmental Health Manager for the City of St. Paul. Prudent plant management will require that woodpiles be turned over periodically in order both to minimize decomposition causing any odors and loss of energy value and to maintain fuel quality. Agricultural biomass stored at the facility will be very dry and tightly baled to minimize deterioration of the

fuel and no odor is anticipated from the agricultural biomass. NGP will control the cooling tower water chemistry to prevent fouling and odor. Odor from the effluent water would indicate the presence of biological activity that would foul the plant's heat transfer surfaces and impede operation of the facility.

Height Restrictions near Airport: The city of Waseca is working with Waseca County to revise the Waseca Municipal Airport Zoning Ordinance, created by the Waseca City-Waseca County Joint Airport Zoning Board. Any structure constructed within either the horizontal zone or conical zone surrounding the Waseca Airport will need to comply with Federal Aviation Authority height guidelines.

Thank you for providing HDR with an opportunity to respond.

Sincerely,

A handwritten signature in cursive script that reads "Michelle F. Bissonnette". The signature is written in dark ink and is positioned above the printed name.

Michelle F. Bissonnette  
Senior Environmental Consultant

cc: Doug Ferber  
Rus Miller